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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/557,752

11/28/2006

Peter Schmalholz

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EXAMINER

DONDERO, WILLIAM E

ART UNIT

PAPER NUMBER

3654

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/557,752	<b>Applicant(s)</b> SCHMALHOLZ, PETER	
	<b>Examiner</b> WILLIAM E. DONDERO	<b>Art Unit</b> 3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/18/2005</u> .                                              | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 18 is objected to because of the following informalities: "approx." should be spelled out completely - -approximately- -. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 11 and 13, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required

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feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 11 recites the broad recitation “the post-decimal point part of the winding ratio will change by 0.1 at most”, and the claim also recites “preferably 0.03 at the most” and “more preferably 0.01 at the most” which is the narrower statement of the range/limitation.

Regarding Claims 12-17 and 18, the claims are rendered indefinite because they depend from cancelled Claim 1 and cancelled Claim 2, respectively. For the Office Action below, it is presumed Claims 12-17 should depend from Claim 11 and Claim 18 should depend from Claim 12.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 13, and 15-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Gerhartz (US-4667889) in view of Maag (EP-0401781). Regarding Claim 11, Gerhartz discloses a process for winding a continuously supplied band 1 onto a bobbin 7 with the bobbin being rotated and the band being reciprocated along the entire length of the bobbin at a winding angle by means of a cross-winding device 2,3,4, wherein each time the bobbin diameter has increased by a particular value, the winding ratio, i.e. the ratio between the number of bobbin rotations and the reciprocating motion (to-and-

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fro stroke) of the cross-winding device, is changed in steps (see Figure 1), characterized in that the bobbin is driven by a separate motor 11 and the cross-winding device is also driven by a separate motor 9 and the change in the winding ratio is performed electronically (via control computer 15) by stepwisely changing the ratio of the speeds of the two motors and that, with the stepwise change, the winding ratio is changed in essentially integral steps (Figures 1-3). Gerhartz is silent about with each change, the post-decimal part of the winding ratio will change by 0.1 at most, preferably 0.03 at the most, more preferably 0.01 at the most; and that the post-decimal point part of the winding ratio is at least two-digit and preferably close to 0 or 0.50 or 0.33 or 0.25. However, Maag discloses a process for winding a continuously supplied band onto a bobbin in which the winding ratio is changed stepwise with each change the post-decimal part of the winding ratio will change by 0.1193 (see differences between decimal portions of winding ratios shown in 6th column of table on page 7); ; and that the post-decimal point part of the winding ratio is at least two-digit and preferably close to 0 or 0.50 or 0.33 or 0.25 (Figure1; Column 6 of Table on page 7; Machine Translation). Further, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to with each change, make the post-decimal part of the winding ratio will change by 0.1 at most, preferably 0.03 at the most, more preferably 0.01 at the most to ensure precise even layers of winding without ribbon winding. Regarding Claim 15, Gerhartz

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discloses that the winding ratio is changed such that the resulting winding angle will stay within a predetermined range (between UK and LK in Figures 1 and 2) (Figures 1-3).

Regarding Claim 16, Gerhartz discloses that the motors are rotary-current drives with frequency converters 12,13 (Figures 1-3). Regarding Claim 17, Gerhartz discloses that the instantaneous bobbin diameter is calculated from a variance comparison of the linear band speed and the number of bobbin rotations (Figures 1-3).

Claims 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerhartz (US-4667889) in view of Maag (EP-0401781) as applied to claims 11, 13, and 15-17 above, and further in view of Jennings et al. (US-6311920). Regarding Claims 12 and 18, Gerhartz in view of Maag is silent about with each change in the winding ratio, the post-decimal point part of the ratio is changed to such a degree that a constant partial overlap with an underlying band track will result, wherein an axial shift to the extent of the desired constant partial overlap is selected and the winding ratio is calculated from the formula,  $V = (na \times 2L \times (V_z + 1/na)) / (na \times 2L - d)$  wherein  $V$  = winding ratio,  $V_z$  = winding ratio number,  $na$  = tie number,  $L$  = winding length of the bobbin in mm, and  $d$  = shift in mm; and depending on the winding angle, the shift is selected such that an overlap of bands of approximately 1/2 a bandlet width emerges. However, Jennings et al. disclose a process for winding a continuously supplied band comprising changing the winding ratio in a stepwise manner and with each change in the winding ratio, the post-decimal point part of the ratio is changed to such a degree that a constant partial overlap with an underlying band track will result, wherein an axial shift  $G$  to the extent of the desired constant partial overlap is selected and the winding

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ratio is calculated from a formula (see Column 6, Lines 7 - 49); and depending on the winding angle, the shift is selected such that an overlap of bands of approximately 1/2 a bandlet width emerges (Figures 1-7). It would have been obvious to one of ordinary skill in the art at the time of the invention to use any formula necessary to calculate the winding ratio based on the actual shift to ensure a precise wind without any ribbon winding effects as taught by Jennings et al.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gerhartz (US-4667889) in view of Maag (EP-0401781) as applied to claims 11, 13, and 15-17 above, and further in view of Poppinghaus et al. (US-5439184). Gerhartz in view of Maag is silent about the winding ratio is changed such that a forward or backward-moving band winding is created. However, Poppinghaus et al. disclose a process for winding a continuously supplied band in which the winding ratio is changed stepwise in an incremental manner such that a forward or backward-moving band winding is created (Figures 18-19; Column 5, Lines 51-64). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the changes to the winding ratio of Gerhartz in view of Maag such that a forward or backward moving band is created as taught by Poppinghaus et al. to ensure a precise wind without any ribbon winding effects as taught by Poppinghaus et al.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Siepmann is cited for disclosing another formula for calculating the winding ratio based on a axial shift.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM E. DONDERO whose telephone number is (571)272-5590. The examiner can normally be reached on Monday through Friday 6:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Cuomo can be reached on 571-272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/W. E. D./

Examiner, Art Unit 3654

/Peter M. Cuomo/

Supervisory Patent Examiner, Art Unit 3654